

# Biobased Solutions

Fall 2008

FOR GOVERNMENT



**Dear Reader:**

*I hope our readers had the opportunity*

*to drive by lush green soybean fields this summer. Their rich green color blanketed landscapes from the Eastern Shore to the Great Plains. The United Soybean Board is pleased to see that biobased products are using soybeans to also "green" the inside of buildings like fire stations in Fayetteville, Ark. In this issue, you can read how city sustainability leaders are turning to biobased spray foam insulation made from soybean oil to save energy, money and benefit the environment. From his first year on the job, Fayetteville Sustainability Director John Coleman saved his city enough money to more than cover his salary.*

*This issue also highlights the exciting partnership between Ohio soybean farmers, researchers and industry. Their soy resins and toner were recently recognized with the Environmental Protection Agency's 2008 Presidential Green Chemistry Award.*

*As you read this newsletter, farmers across the nation will likely be harvesting soybeans. In August, the U.S. Department of Agriculture forecast a harvest of 2.97 billion bushels. Those soybeans will provide meal to feed humans and livestock as well as soybean oil that can replace the petroleum in a wide array of products, including those you will read about in this newsletter. Soybean farmers are proud to be feeding, fueling and greening our nation all at the same time.*

*Sincerely,  
Todd Allen*

*New Uses Committee Chair*

## City Sustainability Director Saves Energy and Money, Cuts Greenhouse Gases with Soy Spray Foam Insulation

Home to the University of Arkansas, Fayetteville is making a name for itself in environmental and energy leadership. About a year ago, Fayetteville Mayor Dan Coody put in place an ambitious sustainability plan to reduce greenhouse gas emissions and generate energy savings. The first order of business was hiring Sustainability Director John Coleman. Simply put, Coleman's job is to reduce the city's environmental impact while simultaneously reducing costs. He has been tasked with generating enough savings to the city budget to pay his salary – a goal he met easily during his first year.

Coleman has worked tirelessly to achieve the city's environmental goals – everything from increasing recycling to reducing the use of petroleum and electricity. One way the city is meeting these targets is through the use of soy biobased products such as BioBased® Insulation and biodiesel fuel.



*Fayetteville Mayor Dan Coody's ambitious sustainability plan includes the use of biobased products to reduce greenhouse gas emissions and generate energy savings.*

Two city fire stations are insulated with BioBased® Insulation – a spray foam insulation that seals a structure's thermal envelope, making it more energy efficient, healthier, more comfortable and durable than traditionally insulated homes. One of the stations was dedicated in August, 2007 and the other in July, 2008. Construction is

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### AS REPORTED AT THE USB STAKEHOLDERS' WORKSHOP



*U.S. Secretary of Agriculture Ed Schafer addressed the attendees of the USB Biobased Products Stakeholders' Workshop where he said implementation of all aspects of the preferential purchasing program for government agencies was one of his top priorities for the rest of the current Administration's term.*

## Implementation of Federal Biobased Preferred Purchasing Program Moves Ahead

Implementation of the biobased provisions of the 2002 Farm Bill and the new 2008 Farm Bill is proceeding said federal leaders at the United Soybean Board-sponsored Biobased Products Stakeholders' Workshop held July 23-24 in Washington, D.C.

Secretary of Agriculture Ed Schafer, whose Department is responsible for implementing the program, pointed out that the designation process has identified 33 biobased product categories for preferred procurement under the program that the new Farm Bill now calls the "Biobased

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## City Sustainability Director Saves Energy and Money, Cuts Greenhouse Gases with Soy Spray Foam Insulation

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starting on a municipal court building and the insulation will be used in it as well. BioBased® Insulation has also been used in several commercial buildings in Fayetteville and in the University of Arkansas' Bogle Park.

Coleman explains that because the BioBased® family of companies is located in Fayetteville, its product is an ideal choice for use in city buildings. "The product is eco-friendly and at the same time we're supporting a local business,"



*Fayetteville Sustainability Director John Coleman reduced the city's environmental impact and simultaneously cut costs. From his first year on the job, he has saved the city budget more than enough money to cover his salary.*

Coleman explained. "It's an easy choice for us and one we plan to continue with all our new buildings."

Mayor Coody added, "It's important that city governments provide examples on how to reduce our dependence on petroleum products. Using



*Two Fayetteville fire stations are now insulated with a soy-based spray foam insulation. Success with the product is leading to its use in local court buildings as well as commercial buildings and more.*

BioBased® Insulation products in our new fire stations accomplishes this goal, and helps our local economy as well."

Fayetteville also uses a B20 biodiesel blend (20 percent biodiesel and 80 percent petroleum diesel), made from Arkansas-produced soybean oil and animal fat feedstocks, in its diesel fleet. The city estimates that the use of B20 has resulted in an annual petroleum reduction of 70,000 gallons and an annual savings of \$8,400. According to Coleman, the city has received a number of positive comments from the public regarding noticeable smoke and noxious odor reduction from the biodiesel-powered vehicles.

*"The product is eco-friendly and at the same time we're supporting a local business. It's an easy choice for us and one we plan to continue with all our new buildings."*

— John Coleman



City and state governments, such as Fayetteville, are increasingly taking the lead in sustainability efforts. Mayor

Coody is one of 805 mayors across the country who signed pledges to reduce greenhouse gas emissions in their cities to levels set in the Kyoto Protocol. In addition, about three dozen cities now have sustainability directors.

**You can read how a Housing and Urban Development home also used soy biobased insulation as featured in the Summer 2007 issue of *Biobased Solutions for Government* available at [www.soybiobased.org](http://www.soybiobased.org)**

## Ohio Advances Biobased at the State Level

A new report and recommendations are now available from the Ohio Agriculture to Chemicals, Polymers and Advanced Materials Task Force. Appointed by Ohio's governor and legislature, the task force identified opportunities for the state to lead the world in biobased products.

Their findings include:

- Expand Ohio's capacity to refine the materials needed to grow the bioproducts market
- Improve the understanding of market potential by analyzing Ohio's current chemical and polymer companies
- Increase Ohio's support for entrepreneurs and innovative small businesses
- Create an Agbioproducts Technology Center to help facilitate greater statewide coordination.

The complete report is available at the "Spotlights" section of the Ohio Department of Agriculture's website [www.ohioagriculture.gov](http://www.ohioagriculture.gov)



Ohio Soybean Council (OSC) representatives participated in the Presidential Green Chemistry Awards in Washington, D.C.. OSC, Battelle and Advanced Image Resources (AIR) were key investors in the research, development and commercialization of soy resins and toner that received the 2008 Presidential Green Chemistry Award by the Environmental Protection Agency (EPA).

## Soy Toner Earns Presidential Green Chemistry Award

*Available in Marketplace Later this Year*

Printers and copiers will soon be changed for the better as they will begin to use soy-based toner—an environmentally friendly technology developed in Ohio and most recently recognized by the U.S. government. The Ohio Soybean Council (OSC), Battelle and Advanced Image Resources (AIR), key investors in the research, development and commercialization of soy resins and toner, were recently awarded the 2008 Presidential Green Chemistry Award by the Environmental Protection Agency (EPA).

This new and innovative technology is being commercialized by AIR, a Georgia-based company, and will be available on the market later this year. AIR will produce the soy-based resin that serves as the building block for the new toner, and sold under the trade names BioRez® and Rezilution®.

The EPA's Presidential Green Chemistry Challenge promotes research to develop less-toxic alternatives to existing technologies, and to reduce or eliminate waste generated from industrial production. An independent panel of technical experts convened by the American Chemical Society selected winners from the nearly 100 nominations for this recognition.

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## Implementation of Federal Biobased Preferred Purchasing Program

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Markets Program". The U.S. Department of Agriculture (USDA) estimates these categories include 2,741 individual products (many contain soybean oil) from 659 companies.

He also noted that the process to establish a biobased labeling program, required in both the 2002 and 2008 Farm Bills, has begun with the first input session held July 22, the day before the Stakeholders' Workshop.

Secretary Schafer also took this opportunity to assure that implementation of all aspects of the preferential purchasing program for government agencies was one of his top priorities for the rest of the current Administration's term. "Now that we have the politics of the 2008 Farm Bill behind us, these are the kind of efforts I want to concentrate on in the final months of our Administration."

Senate Agriculture Committee Chairman Tom Harkin, one of the major champions of the biobased provisions in the 2002 and 2008 Farm Bills, was unable to attend the meeting due to illness. Senate Agriculture Committee staffer Eldon Boes delivered the senator's remarks that urged USDA to move as quickly as possible in implementing all phases of the program.

Addressing the nation's energy concerns, Boes said on the senator's behalf, "We

need to find a better way. And we know what that better way is: We need to transition—rapidly and robustly—to the whole gamut of clean, renewable, domestic sources of energy and biobased products."

USDA Assistant Secretary for Administration Boyd Rutherford described USDA's strategic plan to build on success and fulfill the vision for market development for biobased products. It includes three goals. 1. Increase the federal procurement of biobased products. 2. Increase commercial opportunities for biobased products. 3. Facilitate the adoption of the BioPreferred SM Program by state and local governments.

USDA's Office of Energy Policy and New Uses also distributed copies of the new report: U.S. Biobased Products Market Potential and Projections Through 2025 available at <http://www.usda.gov/oce/reports/energy/BiobasedReport2008.pdf>

Office of the Federal Environmental Executive Chief of Staff Dana Arnold also spoke at the workshop. She said that in addition to the ongoing outreach and education efforts to integrate all federal preferential purchase programs, her office is in the process of evaluating the "score-card" all federal agencies must fill out to measure how successful their preferential purchase programs are.

**Most USB Stakeholders' Workshop presentations as well as a summary of the biobased provisions in the 2008 Farm Bill are available at [www.soybiobased.org](http://www.soybiobased.org). They include:**

### **How Federal Agencies Are Advancing Biobased Procurement**

Donald Lentzen, Department of Energy  
Linwood Gilman, Defense Logistics Agency

### **Federal Trade Commission "Guides for the Use of Environmental Marketing Claims"**

Laura Koss, Staff Attorney, Federal Trade Commission

### **Private Sector Labeling Panel Discussion**

Mike Italiano, Market Transformation to Sustainability  
Jason Metnick, Market Access and Product Labeling Sustainability Forestry Initiative  
Steve Mojo, Biodegradable Products Institute

### **Facts on Food AND Fuel—What the Debate Means for Biobased Products**

Manning Feraci, National Biodiesel Board  
Emily Olson, National Corn Growers Association  
Michael Parr, DuPont

### **Tax Policy—Opportunities and Obstacles for Biobased Producers**

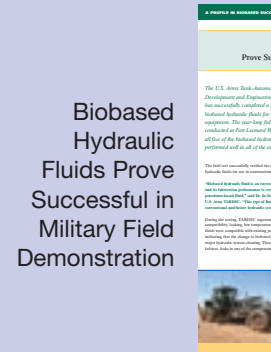
Timothy Urban, Washington Council Ernst & Young

# Check Out the New Profiles of Biobased Success at [www.soybiobased.org](http://www.soybiobased.org)

See new features of how government employees are using many different kinds of biobased products.



## Yellowstone National Park's Efforts to Protect the Park for Its Next 125 Years



## Biobased Hydraulic Fluids Prove Successful in Military Field Demonstration

# Soy Toner Earns Presidential Green Chemistry Award

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Ohio soybean farmers, through their contributions to the soybean checkoff program, have funded the research and development of soy-based resins and toner while successful work by researchers at Battelle made this new technology possible.

There are many advantages of soy-based resins and toners. Not only are these products grown, manufactured and distributed in the U.S., but they offer a big step to reducing dependence on foreign oil. "With more than 400 million pounds of petroleum-derived toners and resins used annually in the U.S. to make 3 trillion copies in photocopiers and printers, there is a great market opportunity for soy-based toners and resins," said AIR President Tom Gandolfi. "While other soy-based inks have been used in the printing industry for over 15 years, gaining a 30% market share, this new technology is the first of its kind in the laser printer and copier industry."

The biggest environmental problem with conventional toners is the difficulty with which these inks are removed from the paper

during recycling. Previous attempts have been made by other companies to develop an environmentally friendly approach to ease the de-inking process, but have failed due to high costs and inadequate performance.

"The innovative technology that Battelle has developed makes the soy-based inks significantly easier to remove from the paper," said, Battelle Polymer Center Senior Program Manager Bhima Vijayendran. "The result is a higher quality of material recovered that streamlines the recycling process without sacrificing the quality and performance of the toner, and it can be used in any laser printer or copier."

There are also no worries when it comes to the quality and performance of soy-based resins and toners.

***"The performance of the soy-based resins and toner is very comparable to traditional petroleum-based products, and has the benefit of being more environmentally friendly," said Gandolfi. "In the past, the laser printer and copier industry didn't have a green solution, but now the soy-based toner will give consumers that alternative."***

### NEW LEAF PAPER®

ENVIRONMENTAL BENEFITS STATEMENT  
of using post-consumer waste fiber vs. virgin fiber

United Soybean Board saved the following resources by using New Leaf Opaque, made with 100% recycled fiber and 100% post-consumer waste, processed chlorine free, and manufactured with electricity that is offset with Green-e® certified renewable energy certificates.

trees	water	energy	solid waste	greenhouse gases
4 fully grown	1,649 gallons	3 million Btu	184 pounds	360 pounds

Calculations based on research by Environmental Defense Fund and other members of the Paper Task Force.

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*Because of the potential for biobased products to create new markets for soybeans, U.S. soybean farmers have invested millions of dollars to research, test and promote biobased products. Much of this work was done through the United Soybean Board (USB), which is composed of 68 U.S. soybean farmers appointed by the U.S. Secretary of Agriculture to invest soybean checkoff funds. As stipulated in the Soybean Promotion, Research and Consumer Information Act, USDA's Agricultural Marketing Service has oversight responsibilities for the soybean checkoff.*